

# Unit 12 Circles Review Packet

**Unless otherwise directed, please round all answers to the nearest tenth place.**

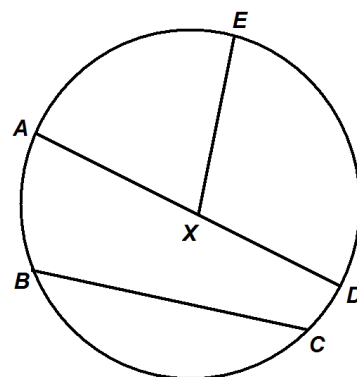
**Directions:** In the box provided next to each target section, put an (S) if you were able to complete the section by *yourSELF*, an (H) if you received a *minimal* amount of *HELP* from me, a classmate, or another source, or a (D) if you felt the section was *DIFFICULT* and required you to get *a lot* of help. This will help provide you by giving you feedback as to what topics you should be focusing on as you prepare for the test.



## TARGET A - Parts of a Circle

For #1 – 4, use the picture below to answer the following questions about  $\odot X$

- 1) Name the center of the circle \_\_\_\_\_
- 2) Name 3 radii \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
- 3) Name the diameter \_\_\_\_\_
- 4) Name a chord that is not a diameter \_\_\_\_\_

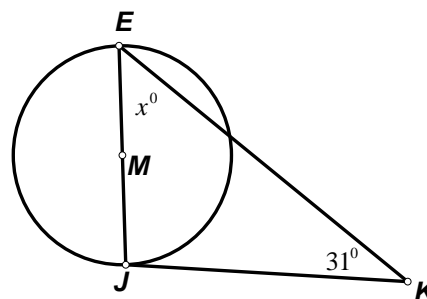


## TARGET B - Tangents

- 5)  $\overline{KJ}$  is tangent to circle M at J (not drawn to scale).

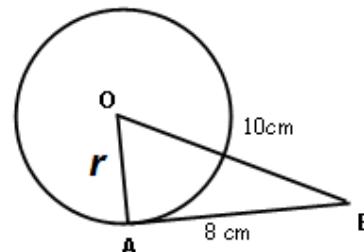
Find the value of  $x$ .

$x =$  \_\_\_\_\_



- 6)  $\overline{BA}$  is tangent to circle O at A. Find the measure of the radius if  $\overline{BO} = 10\text{ cm}$

$r =$  \_\_\_\_\_





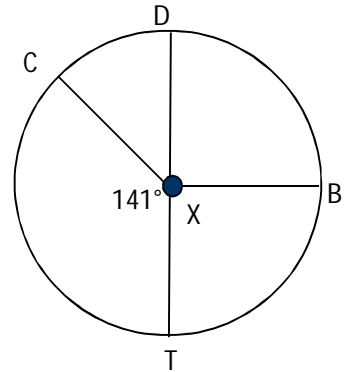
### TARGET C - Angles and Arcs

7) Find the measure of each arc in circle X.  $m\angle DXB = 90^\circ$

a.  $m\widehat{TC}$  \_\_\_\_\_ b.  $m\widehat{TBD}$  \_\_\_\_\_

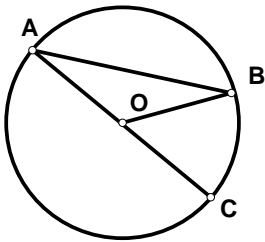
c.  $m\widehat{BTC}$  \_\_\_\_\_ d.  $m\widehat{CD}$  \_\_\_\_\_

e.  $m\widehat{CBD}$  \_\_\_\_\_ f.  $m\widehat{TCD}$  \_\_\_\_\_



### TARGET D - Inscribed Angles and Arcs

8) In circle O,  $m\widehat{BA} = 120^\circ$ . Find  $m\angle A$ .



$m\angle A =$  \_\_\_\_\_

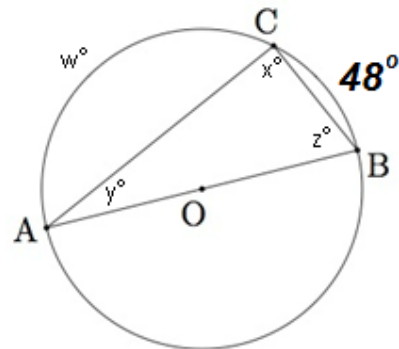
Use the diagram for 9 through 12 A child's toy is designed with a **triangle** inscribed in a circle.  $\overline{BA}$  is a diameter. Find each variable.

9)  $x^\circ =$  \_\_\_\_\_

10)  $y^\circ =$  \_\_\_\_\_

11)  $z^\circ =$  \_\_\_\_\_

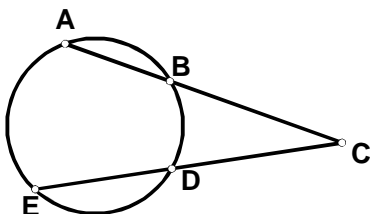
12)  $w^\circ =$  \_\_\_\_\_





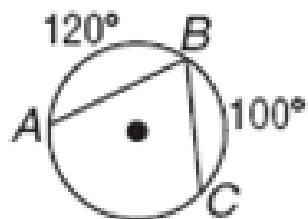
# TARGET E – Angles formed by Chords, Secants and Tangents

- 13) If  $m\widehat{AE} = 120$  and  $m\widehat{BD} = 62$ , find  $m\angle C$ .

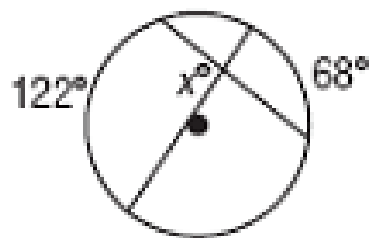


$$m\angle C = \underline{\hspace{2cm}}$$

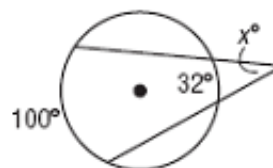
- 14) Find  $m\angle ABC$



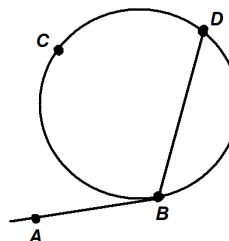
- 15) Find the value of x



- 16) Find the value of x



- 17) If  $m\widehat{BD} = 136^\circ$ , find  $m\angle ABD$





## TARGET F – Equations of a Circle

For #18 – 20, find the center and radius of each circle.

18)  $x^2 + y^2 = 36$

19)  $(x - 2)^2 + (y - 7)^2 = 49$

20)  $(x + 1)^2 + (y + 6)^2 = 16$

For #21 – 23, write the equation of the circle with the given center and radius.

21) center  $(0, 0)$ ;  $r = 7$

22) center  $(4, 3)$ ;  $r = 8$

23) center  $(5, 3)$ ;  $r = 2$

For #24-36, find the center and the radius. Then graph the circle.

24)  $x^2 + y^2 = 25$

25)  $(x - 3)^2 + (y - 4)^2 = 9$

26)  $(x + 2)^2 + (y + 4)^2 = 1$

center \_\_\_\_\_

center \_\_\_\_\_

center \_\_\_\_\_

radius \_\_\_\_\_

radius \_\_\_\_\_

radius \_\_\_\_\_

